

IN THE CLAIMS:

1. (Cancelled)

2. (Cancelled)

3. (Cancelled)

4. (Currently Amended) A thin film transistor according
to claim 3, wherein comprising:

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a polycrystalline silicon semiconductor layer having
therein a channel region, a source region, and a
drain region, the source region and the drain region
located on either side of the channel region, the
drain region including a lightly doped drain (LDD)
region; and

wherein the relationship of expression (2)

$$\underline{(R+30) \cdot W < 1 \times 10^3} \quad (2)$$

is satisfied, where R (k Ω / \square) is the sheet resistance
of the LDD region and W (μ m) is the channel width of
the channel region, the channel width W of the
channel region is being 2 μ m or less.

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5. (Cancelled)

6. (Currently Amended) A thin film transistor according to claim 4, wherein the sheet resistance of the ~~drain~~-LDD region in the range of from 20 k Ω /□ to 100 k Ω /□.

7. (Cancelled)

8. (Currently Amended) A thin film transistor comprising a polycrystalline silicon semiconductor layer having ~~formed~~ therein a channel region, a source region, a drain region, and a low concentration impurity region having an impurity concentration less than that of the source region and the drain region, the source region and the drain region being ~~disposed~~-located on either side of the channel region and the low concentration impurity region being ~~formed~~-located in at least one of a region between the source region and the channel region and a region between the drain region and the channel region, the thin film transistor wherein:

the relationship of expression (3)

$$\Delta L > (W \cdot V_{tc}) / 36 \quad (3)$$

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is satisfied, where ΔL (μm) is the length of the low concentration impurity region, V_{lc} (V) is the source-drain voltage, and W (μm) is the channel width of the channel region, the channel width W (μm) of the channel region being 2 μm or less.

9. (Currently Amended) A thin film transistor according to claim 8, wherein comprising a polycrystalline silicon semiconductor layer having therein a channel region, a source region, a drain region, and a low concentration impurity region having an impurity concentration less than that of the source region and the drain region, the source region and the drain region being located on either side of the channel region and the low concentration impurity region being located in at least one of the region between the source region and the channel region and a region between the drain region and the channel region, the thin film transistor wherein:

the relationship of expression (4)

$$\Delta L < 1.5 \cdot (W/L) \quad (4)$$

is satisfied, where ΔL (μm) is the length of the low concentration impurity region, W (μm) is the channel width of the channel region, and L (μm) is the

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channel length of the channel region, the channel
width W (μm) of the channel region being 2 μm or
less.

94 10. (Currently Amended) A thin film transistor according
~~to claim 9, wherein~~ comprising a polycrystalline silicon
semiconductor layer having therein a channel region, a source
region, a drain region, and a low concentration impurity
region having an impurity concentration less than that of the
source region and the drain region, the source region and the
drain region being located on either side of the channel
region and the low concentration impurity region being located
in at least one of the region between the source region and
the channel region and a region between the drain region and
the channel region, the thin film transistor wherein:

the relationship of expression (20)

$$(W-V_{lc})/36 < \Delta L < 1.5 \cdot (W/L) \quad (20)$$

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is satisfied, wherein ΔL (μm) is the length of the
low concentration impurity region, V_{lc} (V) is the
source-drain voltage, W (μm) is the channel length
of the channel region, the channel width W (μm) of
the channel region is being 2 μm or less.

94 11. (Currently Amended) A thin film transistor ~~according~~
~~to claim 9~~ comprising a polycrystalline silicon semiconductor
layer having therein a channel region, a source region, a
drain region, and a low concentration impurity region having
an impurity concentration less than that of the source region
and the drain region, the source region and the drain region
being located on either side of the channel region and the low
concentration impurity region being located in at least one of
a region between the source region and the channel region and
a region between the drain region and the channel region, the
thin film transistor wherein:

the relationship of expression (3)

$$\Delta L > (W \cdot V_{lc}) / 36 \quad (3)$$

is satisfied, where ΔL (μm) is the length of the low
concentration impurity region, V_{lc} (V) is the

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source-drain voltage, and W (μm) is the channel
width of the channel region, the channel width W
(μm) of the channel region being 2 μm or less,
wherein the sheet resistance of the low
concentration impurity region is in the range of
from 20 $\text{k}\Omega/\square$ to 100 $\text{k}\Omega/\square$.

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12. (Cancelled)

13. (Original) A thin film transistor according to claim
11, wherein the low concentration impurity region is formed
only in the region between the drain region and the channel
region.

14. (Cancelled)

15. (Currently Amended) A liquid crystal display device
~~according to claim 14 comprising:~~

a liquid crystal panel portion comprising thin film
transistor switching elements, each of the thin film
transistors having a polycrystalline silicon
semiconductor layer having therein a channel region,

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a source region, and a drain region, the source region and the drain region located on either side of the channel region, the drain region having located therein a lightly doped drain (LDD) region;
and

a backlight portion for supplying light from a rear surface side of the liquid crystal panel portion;

wherein the relationship of expression (6)

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$$\frac{(R+30) \cdot B \cdot W}{1} < 1 \times 10^6 \quad (6)$$

is satisfied, where R ($\text{k}\Omega/\square$) is the sheet resistance of the drain region, B (cd/m^2) is the luminance of the backlight portion, and W (μm) is the channel width of the channel region, the channel width W being 2 μm or less.

16. (Cancelled)

17. (Currently Amended) An EL display device ~~according to claim 16,~~ comprising a light-emitting layer and a counter electrode thereon, the light-emitting layer being on a pixel

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electrode upper layer on a substrate having thin film transistors, each of the thin film transistors comprising:

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a polycrystalline silicon semiconductor layer having therein a channel region, a source region, and a drain region, the source region and the drain region located on either side of the channel region, the drain region having located therein a lightly doped drain (LDD) region; and

wherein the relationship of the expression (6)

$$\underline{(R+30) \cdot B \cdot W < 1 \times 10^6} \quad (6)$$

is satisfied, where R ($k\Omega/\square$) is the sheet resistance of the ~~drain~~ LDD region, B (cd/m^2) is the light intensity of light applied to the channel region, and W (μm) is the channel width of the channel region, the channel width W being 2 μm or less.

18. (Cancelled)

19. (Cancelled)

20. (Cancelled)

ay 21. (New) A thin film transistor comprising a polycrystalline silicon semiconductor layer having therein a channel region, a source region, a drain region, and a low concentration impurity region having an impurity concentration less than that of the source region and the drain region, the source region and the drain region being located on either side of the channel region and the low concentration impurity region being located in at least one of the region between the source region and the channel region and a region between the drain region and the channel region, the thin film transistor wherein:

the relationship of expression (4)

$$\Delta L < 1.5 \cdot (W/L) \quad (4)$$

is satisfied, where ΔL (μm) is the length of the low concentration impurity region, W (μm) is the channel width of the channel region, and L (μm) is the channel length of the channel region, the channel width W (μm) of the channel region being 2 μm or less, wherein the sheet resistance of the low concentration impurity region is in the range of from 20 $\text{k}\Omega/\square$ to 100 $\text{k}\Omega/\square$.

22. (New) A thin film transistor comprising a polycrystalline silicon semiconductor layer having therein a channel region, a source region, a drain region, and a low concentration impurity region having an impurity concentration less than that of the source region and the drain region, the source region and the drain region being located on either side of the channel region and the low concentration impurity region being located in at least one of the region between the source region and the channel region and a region between the drain region and the channel region, the thin film transistor wherein:

the relationship of expression (20)

$$(W-V_{lc})/36 < \Delta L < 1.5 \cdot (W/L) \quad (20)$$

is satisfied, wherein ΔL (μm) is the length of the low concentration impurity region, V_{lc} (V) is the source-drain voltage, W (μm) is the channel length of the channel region, the channel width W (μm) of the channel region being 2 μm or less, wherein the sheet resistance of the low concentration impurity region is in the range of from 20 $\text{k}\Omega/\square$ to 100 $\text{k}\Omega/\square$.
